

## Extension guide fitting for drawers

### BACKGROUND OF THE INVENTION

5           The invention relates to an extension guide fitting for drawers comprising an extension rail at the drawer side, a carrier rail at the furniture body side and a middle rail which runs between those two rails at both sides of the drawer, wherein the load between the rails is transmitted by means of running rollers which are mounted in separate carriages, wherein mounted in the front region of the carrier rail is a stationary  
10 support roller on which the extension rail runs with a running limb and is supported at least in the closed condition of the drawer.

          In the case of guide arrangements with running rollers which are mounted in their own carriages, the load-transmitting running elements, namely the carriages with the rolling bodies, are disposed rather in the centre of the guide system. In this  
15 connection the term running rollers is used to denote rolling bodies quite generally, that is to say disc-shaped runner wheels, balls and rollers.

          In the case of extension guide fittings with riveted running rollers, the load-transmitting elements are at the largest possible spacing from each other in the closed condition.

20           Therefore, extension guide fittings with running rollers which are mounted in carriages are more unstable in the closed condition than comparable extension guide fittings with riveted running rollers. That applies in particular in relation to full extension arrangements because they have one rail or running system more than partial extension arrangements.

25           The instability of the extension guide fitting makes itself felt adversely in the closed condition of the drawer in relation to the fronts of articles of furniture. Firstly, because the joins between fronts which are disposed in mutually superposed relationship are of different sizes, depending on the respective loading in the drawer or depending on respective production tolerances. Secondly, because the fronts do not  
30 impinge against the front edge of the body of the article of furniture in parallel relationship, but come to bear against the front edge of the body of the article of furniture upwardly or downwardly, depending on the respective loading on the drawer

or depending on respective production tolerances. It has therefore been proposed that, in the case of a full extension arrangement, a so-called run-on portion can be mounted on the drawer rail, the run-on portion running on to the carrier rail at the furniture body side, about 60 mm before reaching the closed position of the extension guide fitting or the drawer. In spite of an inclined run-on surface which is as gentle as possible, the moment at which the run-on portion runs on to the carrier rail can be clearly felt and is therefore perceived as undesirable.

Therefore, Austrian utility model AT 4518 U1 proposed arranging at the front end of each carrier rail a stationary support roller, whereby a gentler running-on movement of the drawer was achieved. That structure however did not prove worthwhile in relation to very heavy drawers.

#### SUMMARY OF THE INVENTION

Therefore the object of the invention is to provide improved heightwise positioning for the front region of the drawer.

The object according to the invention is attained in that mounted in the front region of the carrier rail are at least two support rollers at which the extension rail runs with its running limb and is supported at least in the closed condition of the drawer.

Arranging a plurality of support rollers at the front ends of the carrier rails not only permits a greater loading to be carried but it also protects and looks after the coating on the extension rails and provides for smoother movement of the drawer.

The term stationary is to be interpreted as meaning that the support rollers are not displaceable in relation to the carrier rail (unlike the running rollers in the carriages).

#### BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention are described hereinafter with reference to the Figures of the accompanying drawings.

Figure 1 shows a perspective view of an extension guide fitting according to the invention,

Figure 2 shows an exploded perspective view of an extension guide fitting according to the invention,

Figure 3 shows an end view of the extension guide fitting according to the invention with parts of the drawer,

Figure 4 shows a view of the front end of the extension guide fitting in the direction of the arrows A-A in Figure 3 when the drawer is closed,

Figure 5 shows the same view as in Figure 4 when the drawer is fully extended,

Figure 6 shows an end view of the extension guide fitting according to the invention for the drawer, and

Figures 7 to 9 show side views of the support rollers and the mounting thereof.

#### DETAILED DESCRIPTION OF THE INVENTION

The extension guide fitting according to the invention has a carrier rail 2 which is secured to a side wall of an article of furniture, an extension rail 4 which is secured to the drawer 10 and a middle rail 3 which runs between the two rails 1, 4.

Provided between the carrier rail 2 and the middle rail 3 is a carriage 5 carrying running rollers.

At least one carriage 5 with running rollers is also disposed between the middle rail 3 and the extension rail 4.

As, in the closed condition of the drawer 10, the carriages 5 are disposed rather in the middle of the guide system, instability of the drawer 10 could not be avoided in the case of a conventional extension guide fitting.

In accordance with the invention, provided in the front region of the carrier rail 2 are at least two support rollers 8, at which the extension rail 4 runs with a running limb 11. The support rollers 8 are arranged one behind the other in the direction of displacement of the drawer 10. The extension rail 4 is of an inverted U-shaped profile, with a central limb 4' and two side limbs 4'' and the running limb 11 is angled directly from a side limb 4'' towards the interior of the rail profile.

In the illustrated embodiment the extension rail 4 is arranged directly beneath the drawer bottom 6.

In the embodiment shown in Figures 4 and 5, the support roller 8 is mounted in a block 12 which is fitted displaceably on the carrier rail 2. In that way it is possible to adjust both the spacing of the running roller 8 from the front edge 13 of the carrier rail 2 and also the height of the support roller 8. The block 12 is formed by two plates 13.

In the embodiment shown in Figures 7 and 8 two support rollers 8 are mounted on a rocker member 14. In the embodiment of Figure 7 a third support roller 8 is mounted on the shaft of the rocker member 14.